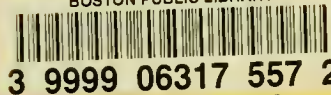


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NATIONAL RECOVERY ADMINISTRATION

DIVISION OF REVIEW

EVIDENCE STUDY

NO. 41

OF

THE WASTE MATERIALS TRADE

Prepared by

R. H. HOWARD

October, 1935

PRELIMINARY DRAFT

(NOT FOR RELEASE: FOR USE IN DIVISION ONLY)

THE EVIDENCE STUDY SERIES

The EVIDENCE STUDIES were originally planned as a means of gathering evidence bearing upon various legal issues which arose under the National Industrial Recovery Act.

These studies have value quite aside from the use for which they were originally intended. Accordingly, they are now made available for confidential use within the Division of Review, and for inclusion in Code Histories.

The full list of the Evidence Studies is as follows:

- | | |
|-------------------------------------|---|
| 1. Automobile Manufacturing Ind. | 23. Mason Contractors Industry |
| 2. Boot and Shoe Mfg. Ind. | 24. Men's Clothing Industry |
| 3. Bottled Soft Drink Ind. | 25. Motion Picture Industry |
| 4. Builders' Supplies Ind. | 26. Motor Bus Mfg. Industry (Dropped) |
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| 12. Fab. Metal Prod. Mfg., etc. | 34. Retail Trade Industry |
| 13. Fishery Industry | 35. Rubber Mfg. Ind. |
| 14. Furniture Mfg. Ind. | 36. Rubber Tire Mfg. Ind. |
| 15. General Contractors Ind. | 37. Silk Textile Ind. |
| 16. Graphic Arts Ind. | 38. Structural Clay Products Ind. |
| 17. Gray Iron Foundry Ind. | 39. Throwing Industry |
| 18. Hosiery Ind. | 40. Trucking Industry |
| 19. Infant's & Children's Wear Ind. | 41. Waste Materials Ind. |
| 20. Iron and Steel Ind. | 42. Wholesale & Retail Food Ind. (See No. 51) |
| 21. Leather | 43. Wholesale Fresh Fruit & Veg. |
| 22. Lumber & Timber Prod. Ind. | |

In addition to the studies brought to completion, certain materials have been assembled for other industries. These MATERIALS are included in the series and are also made available for confidential use within the Division of Review and for inclusion in Code Histories, as follows:

- | | |
|------------------------------------|---|
| 44. Wool Textile Industry | 49. Household Goods & Storage, etc. (Dropped) |
| 45. Automotive Parts & Equip. Ind. | 50. Motor Vehicle Retailing Trade Ind. |
| 46. Baking Industry | 51. Retail Tire & Battery Trade Ind. |
| 47. Canning Industry | 52. Ship & Boat Bldg. & Repairing Ind. |
| 48. Coat and Suit Ind. | 53. Wholesaling or Distributing Trade |

L. C. Marshall
Director, Division of Review

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1. The first part of the paper

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The second part of the paper is devoted to the study of the properties of the function $g(x)$ defined by the equation $g(x) = \sum_{n=0}^{\infty} \frac{x^n}{n!}$.

The third part of the paper is devoted to the study of the properties of the function $h(x)$ defined by the equation $h(x) = \sum_{n=0}^{\infty} \frac{x^n}{n!}$.

The fourth part of the paper is devoted to the study of the properties of the function $i(x)$ defined by the equation $i(x) = \sum_{n=0}^{\infty} \frac{x^n}{n!}$.

The fifth part of the paper is devoted to the study of the properties of the function $j(x)$ defined by the equation $j(x) = \sum_{n=0}^{\infty} \frac{x^n}{n!}$. It is shown that $j(x)$ is a continuous function of x and that it satisfies the differential equation $j'(x) = j(x)$. The function $j(x)$ is also shown to be the unique solution of this equation which is equal to 1 at $x=0$. The function $j(x)$ is then shown to be the exponential function e^x .

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WASTE MATERIALS TRADE

Foreword

The chief sources of information used in the writing of this study are the Census reports on the Wholesale Trade for the years 1929 and 1933. Additional labor data presented in Chapter II were obtained from an analysis of questionnaires sent out in 1933 by the NRA, Research and Planning Division, through the Bureau of the Census, covering a small but representative sample of the Trade. The export and import data used were taken from publications of the Bureau of Foreign and Domestic Commerce, and additional material has occasionally been taken from private sources.

It should be noted that there are practically no data available which are comprehensive enough to apply to the Trade as defined by the Code. It has apparently not been possible for the Code Authority to assemble such information, and the Census materials obviously are not sufficiently comprehensive because of the significant differences in the Trade as defined by the Code and by the Census classification. As explained in Chapter I herein, the former covers both retail and wholesale establishments while the Census classification for the Waste Materials Trade covers only the wholesale branch of the Trade. Furthermore, the 1933 Census data do not include establishments with annual sales of less than \$1,000 (or less than \$500 in the case of assemblers and country buyers, of whom there are only a negligible number in this trade). Since the 1929 data do not exclude these smaller establishments, a comparison of the 1929 and 1933 data for any given series must be understood somewhat to overstate the decline which occurred from 1929 to 1933.

In general, the Census data presented in this study apply not to the entire wholesale trade in waste materials but only to "wholesalers proper." In some cases data for all types of wholesale establishments were available, but since complete state breakdowns were not always available, the less comprehensive series on wholesalers proper were used instead in order to retain general comparability of the data from one table to another. As indicated in the text, the wholesale proper group is so important both as to number of establishments and as to sales that it may confidently be regarded as representative of all types of wholesale establishments in the Trade.

Chapter I

NATURE OF THE INDUSTRY

Code Definition of the Trade

The Trade was defined by the Scrap Iron, Nonferrous Scrap Metals and Waste Materials Trade Code as follows:

"The term 'Scrap Iron, Nonferrous Scrap Metal and Waste Materials Trade' or 'Trade' as used herein, and as subdivided in the following specific commodity trades, includes the buying and/or handling for resale purposes on commission, or otherwise, of scrap iron and steel, nonferrous scrap metal, cotton and woolen rags, scrap rubber, waste paper, and other commodities commercially classified as waste materials. It shall also include the buying and/or handling for resale purposes on commission or otherwise, of textile waste insofar as the members of that division of the trade, as hereinafter defined, shall signify their intentions in writing to the Waste Trade Committee to be governed by this Code."

Seven commodity subdivisions were covered by the Code as follows: the Scrap Iron and Steel Trade, the Non-Ferrous Scrap Metal Trade, the Wool Stock Trade, the Scrap Rubber Trade, the Waste Paper Trade (which later came under a supplementary Code), the Cotton Rag Trade, and the Textile Waste Trade.

Description of the Trade

The Trade includes the buying and handling for resale purposes on commission or otherwise of various sorts of waste materials. As Administrator Hugh S. Johnson indicated in his report to the President, March 8, 1934, recommending approval of the Code, the Trade

"..... is one of collection, the wholesaler buys from the retailer and sells to the industrial consumer. The organization of this trade is complicated by the fact that the usual distinction between wholesaler and retailer is blurred. Firms which are retailers of certain commodities included in this trade are often wholesalers of other commodities."

The direction of the services usually performed by retailers and wholesalers is just reversed in this Trade, for the retailer, instead of distributing goods to the ultimate consumer, collects material from him, and the wholesaler instead of selling to the retailer, buys from him, and so on.

Any attempt to distinguish between wholesale and retail operations, and to set up a separate code for each was abandoned because of this lack of a clear line of demarcation between the two, and the Code covers both retailers and wholesalers. It consists, at the retail end, of an indeterminate number of one-man junk collectors or peddlers, many of whom are crippled or unfortunates who cannot otherwise make a living. These individuals gather all types of waste, including rags, scrap iron, waste paper, and scrap rubber

from homes, junk heaps, public dumps, garages, and other sources. This waste material is then sorted and resold to both large and small dealers. The smaller, or "mixed" dealer usually resells each different type of waste to wholesalers specializing in that particular type of waste product. The wholesaler completes the sorting, grading, or treating of the waste and resells it to the industrial consumer.

Total Number of Establishments

The total number of establishments in the wholesale Trade as reported by the Wholesale Censuses for 1929 and 1933 was 4,000 in the former year and 3,417 in the latter. (See Table III, hereinafter.)

Number of Wholesalers Proper by States

Data on the number of wholesalers proper ^{1/} which include "wholesale merchants, exporters, importers, and limited function wholesalers" are presented for the six leading states in Table I. Although state data on number of establishments are available for all types of wholesalers in the Trade, data on "wholesalers proper" have been presented in order to retain comparability with later tables on sales and wage earners where complete state breakdowns are not available for all types of establishments. It may also be noted that in this Trade the total number of establishments reported is in most cases only slightly larger than the number reported for "wholesalers proper." Table III, below, shows in fact that approximately 98 per cent of all establishments fell in the "wholesalers proper" group in 1929 and 1933.

Table I, below, shows that approximately half the total number of establishments were situated in the six states listed, in 1929 and 1933. The three states, New York, Ohio, and Pennsylvania accounted for about a third of the total in each of these years.

^{1/} This term as used in the 1933 Census is comparable with the term "wholesalers only" as used in the 1929 Census.

TABLE I

Number of Establishments of Wholesalers Proper, by Six Principal States, 1929 and 1933

State	1929		1933	
	Number	Per Cent of Total	Number	Per Cent of Total
U. S. Total	3,919	100.0	3,360	100.0
California	158	4.0	153	4.5
Illinois	223	5.7	227	6.8
Massachusetts	236	6.0	146	4.3
New York	600	15.3	459	13.7
Ohio	325	8.3	326	9.7
Pennsylvania	481	12.3	331	9.9
All Others	1,896	48.4	1,718	51.1

Source: Census of Wholesale Distribution, 1929, U. S. Summary, and State reports, Table 2; and Census of American Business, 1933, Wholesale Distribution, U. S. Summary, and State reports, Table 2A. The 1933 data do not include establishments with annual sales of less than \$1,000.

Establishments Classified by Value of Sales per Establishment

Data classifying establishments by value of sales per establishment are presented in Table II below, for wholesale merchants in the Trade. Similar data are not available for all wholesale establishments, but the group covered constituted 93 per cent of all establishments in 1933 and accounted for 55 per cent of net sales in that year.

The table shows that about 83 per cent of all wholesale merchants did a business valued at less than \$50,000 in 1933, but that this group accounted for only 18 per cent of total net sales for the Trade, while less than 1 per cent of the merchants accounted for more than 20 per cent of the business.

TABLE II

Wholesale Merchants Classified by Value of Net Sales
Per Establishment, 1933

Value of Net Sales Per Establishment	Establishments		Total Value of Sales	
	Number	Per Cent of Total	Amount (000's)	Per Cent of Total
Total	3,343 <u>a/</u>	100.0	\$155,661 <u>b/</u>	100.0
Under \$50,000	2,771	82.8	27,934	18.0
\$50,000 - \$99,999	255	7.6	17,739	11.4
\$100,000 - \$199,999	163	4.9	22,460	14.4
\$200,000 - \$299,999	66	2.0	15,884	10.2
\$300,000 - \$499,999	39	1.2	15,001	9.6
\$500,000 - \$999,999	32	1.0	23,342	15.0
\$1,000,000 and over	17	.5	33,301	21.4

Source: Census of American Business, 1933, Wholesale Distribution, U. S. Summary, Table 7. The 1933 data do not include establishments with annual sales of less than \$1,000.

a/ This figure is not consistent with a total of 3,342 for wholesale merchants elsewhere reported by the Census. See Table III, below.

b/ This figure is not consistent with a total of \$155,574 for wholesale merchants elsewhere reported by the Census. See Table III, below.

Establishments Classified by Type of Distributor

A breakdown of the total number of wholesale establishments and total net sales by type of distributor is given in Table III for the years 1929 and 1933.

As already noted, wholesalers proper, consisting of four sub-groups, represented by far the most important types of distributors in both years. They constituted about 98 per cent of all establishments in each year, and accounted for about 86 per cent of the net sales in 1929 and 96 per cent in 1933. The most important sub-group, wholesale merchants, accounted for nearly all the group's establishments in both years, and most of the sales in 1929. In 1933, however, the sales of exporters, who were only six in number as compared with thirteen in 1929, reported an almost eight-fold increase in sales. There was, meanwhile, a decline of about 65 per cent in the sales reported by wholesale merchants, with the result that the sales figures for these two sub-groups, merchants and exporters, were not very different in 1933 -- \$156,000,000 for the former, and \$108,000,000 for the latter. The corresponding figures for 1929 were \$444,000,000 and \$14,000,000.

TABLE III

Number of Wholesale Establishments and Net Sales Classified by
Type of Distributor, 1929 and 1933

Type of Distributor	Number of Establishments		Net Sales (000's)	
	1929 <u>a/</u>	1933	1929	1933
All Types	<u>4,000</u>	<u>3,417</u>	<u>\$552,280</u>	<u>\$282,602</u>
Wholesalers Proper	<u>3,919</u>	<u>3,360</u>	<u>474,453</u>	<u>272,173</u>
Wholesale Merchants	3,873	3,342 <u>b/</u>	444,284	155,574 <u>c/</u>
Exporters	13	6	13,604	108,145
Importers	6	1 <u>d/</u>	2,117	87 <u>d/</u>
Limited Function Wholesalers	<u>27</u>	<u>11</u>	<u>14,448</u>	<u>8,367</u>
Manufacturer's Sales Branches	<u>3</u>	<u>2</u>	<u>4,572</u>	<u>169</u>
Agents and Brokers	<u>78</u>	<u>48</u>	<u>73,255</u>	<u>10,260</u> <u>d/ e/</u>
Brokers	53	35	53,890	8,593
Commission Merchants	8	4	3,944	522
Manufacturers' Agents	2	6	1,235	408
Other Agents	15	3	14,186	<u>f/</u>
Assemblers and Country Buyers	--	7	-----	<u>f/</u>

Source: Census of Wholesale Distribution, 1929, U. S. Summary, Table 5, 6, 7; and Census of American Business, 1933, Wholesale Distribution, U. S. Summary, Table 23. The 1933 data do not include establishments with annual sales of less than \$1,000 or less than \$500 in the case of assemblers and country buyers.

- a/ The 1929 figures as taken from the 1929 Census report do not check throughout with those given for that year in the 1933 Census.
- b/ This figure is not consistent with a total of 3,343 for wholesale merchants elsewhere reported by the Census. See Table II, above.
- c/ This figure is not consistent with a total of \$155,661 for wholesale merchants elsewhere reported by the Census. See Table II, above.
- d/ This figure is not published in the U. S. Summary report for 1933, but has been derived through comparison of State and Summary reports.
- e/ Includes sales of assemblers and country buyers.
- f/ Not published separately but included in the total sales for agents and brokers.

Establishments Classified by Chief Divisions of the Trade, by Principal States

Of the three chief divisions of the wholesale trade the Junk and Scrap Division was by far the most important, for the country as a whole, on the basis of number of establishments. Out of the total 4,000 in 1929, there were 3,083 in this category. (See Table IV below.)

Junk and Scrap establishments were likewise the most numerous in each of the six leading states, and in the "all others" group. There was not so high a degree of concentration in this Division within these six states, however, as was the case with waste rubber, rags and paper, since 75 per cent of all establishments were in these states. New York State alone reported 42 per cent of the total in this Division.

TABLE IV

Number of Wholesale Establishments Classified by Chief Divisions of the Trade, by Six Principal States, 1929

State	Division							
	All Divisions		Junk and Scrap		Iron and Steel Scrap		Waste Rubber, Rags and Paper	
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
U. S. Total	4,000	100.0	3,083	100.0	644	100.0	273	100.0
California	161	4.0	132	4.3	18	2.8	11	4.0
Illinois	236	5.9	170	5.5	51	7.9	15	5.5
Massachusetts	237	5.9	197	6.4	18	2.8	22	8.0
New York	623	15.6	414	13.4	95	14.7	114	41.7
Ohio	334	8.4	257	8.3	65	10.1	12	4.4
Pennsylvania	500	12.5	365	11.8	105	16.3	30	11.0
All Others	1,909	47.7	1,548	50.3	292	45.4	69	25.4

Source: Census of Wholesale Distribution, 1929, U. S. Summary and State reports, Table 5.

Total Volume of Sales

As shown in Table III, above, total net sales reported by the wholesale Census amounted to \$552,280,000 in 1929 and \$282,602,000 in 1933. Actually the decline was presumably somewhat less than the 1933 figure indicates because of the fact that the Census report in that year did not cover establishments having annual sales of less than \$1,000 or less than \$500 in the case of assemblers and country buyers, whereas the 1929 canvass included both these groups.

New Establishments Opened, 1930-1933

"Wholesale proper" establishments started during 1930-1933 comprised 25 per cent of all the establishments in the Trade in 1933, but accounted for only 6.2 per cent of the total sales. It may be significant that for the country as a whole the ratio of expenses and of payrolls to net sales for new establishments was nearly twice what it was for all establishments. Table V below which gives this information, also shows data on new establishments for the six states selected by the Census to represent the various geographic regions of the country.

TABLE V

"Wholesale Proper" Establishments Started 1930-1933, Compared with
Total Such Establishments in 1933, for Selected States.

State and Establishments	Number of Estab- lishments	Net Sales (000's)	Total Expenses		Payrolls	
			Amount (000's)	Per Cent of Net Sales	Amount (000's)	Per Cent of Net Sales
<u>U. S. Total</u>						
Total	3,360	\$272,173	\$29,499	10.8	\$12,825	4.7
New	850	\$16,904	\$3,401	20.1	\$1,474	8.7
New as % of Total	25.3	6.2	11.5	---	11.5	---
<u>Massachusetts</u>						
Total	145	\$8,860	\$1,832	20.7	\$867	9.8
New	19	\$865	\$152	17.6	\$72	8.3
New as % of Total	13.1	9.8	8.3	---	8.3	---
<u>Rhode Island</u>						
Total	22	\$273	\$82	30.0	\$36	13.2
New	3	\$24	\$7	29.2	\$4	16.7
New as % of Total	13.6	8.8	8.5	---	11.1	---
<u>Ohio</u>						
Total	326	\$28,258	\$3,888	13.8	\$1,550	5.5
New	76	\$1,939	\$387	20.0	\$165	8.5
New as % of Total	23.3	6.9	10.0	---	10.6	---
<u>Indiana</u>						
Total	118	\$5,610	\$819	22.7	\$381	10.6
New	20	\$328	\$76	23.2	\$39	11.9
New as % of Total	16.9	9.1	9.3	---	10.2	---
<u>South Carolina</u>						
Total	22	\$1,427	\$118	8.3	\$55	3.9
New	7	\$218	\$32	14.7	\$16	7.3
New as % of Total	31.8	15.3	27.1	---	29.1	---
<u>Texas</u>						
Total	93	\$1,874	\$393	21.0	\$183	9.8
New	29	\$136	\$39	28.7	\$20	14.7
New as % of Total	31.2	7.3	9.9	---	10.9	---
<u>California</u>						
Total	153	\$6,971	\$1,723	24.7	\$777	11.1
New	51	\$1,032	\$236	23.1	\$108	10.6
New as % of Total	33.3	14.7	13.7	---	13.9	---
<u>Oregon</u>						
Total	21	\$1,409	\$315	22.4	\$128	9.1
New	6	\$46	\$15	32.6	\$6	13.0
New as % of Total	28.6	3.3	4.8	---	4.7	---

Source: Data for total establishments from Census of American Business, 1933, Wholesale Distribution, U. S. Summary and State reports, Table 2B; data on new establishments from Ibid., report on New and Old Establishments, Appendix B; and percentage of new to total computed.

The 1933 data do not include establishments with annual sales of less than \$1,000.

The number of new establishments of wholesalers proper opening in 1933 is shown in Table VI, below, to have been about 43 per cent of that total opened during the four-year period 1930-1933, while the average rate of the three previous years was only about 19 per cent of the total. A breakdown for the year 1933 by quarters shows that the largest number of openings occurred in the third quarter.

TABLE VI

Number of Establishments of Wholesalers Proper Which Opened,
1930-1933, by Period During Which Opened

Period During Which Opened	Establishments	
	Number	Per Cent of Total
Total Opened	850	100.0
1930 to Jan. 1, 1933	482	56.7
Year 1933	368	43.3
First quarter	36	4.2
Second quarter	101	11.9
Third quarter	131	15.4
Fourth quarter	100	11.8

Source: Census of American Business, 1933, Wholesale Distribution, New and Old Establishments, Table 8. The 1933 data do not include establishments having annual sales of less than \$1,000.

Disappearance of Establishments

In 1933, the reported number of "old" establishments of all types of wholesalers and of wholesalers proper was approximately 64 per cent of the 1929 total number, this indicating that some 36 per cent went out of business for one reason or another during this period. However, the decline is presumably not so great as the 1933 figure indicates because of the fact, already noted, that the Census coverage for that year was less complete than in 1929.

TABLE VII

Disappearance of Wholesale Establishments: of all Types
and of Wholesalers Proper, 1929-1933 a/

Item	Establishments of all Types of Distributors		Establishments of Wholesalers Proper	
	Number	Per Cent	Number	Per Cent
	of 1929 Total		of 1929 Total	
1929	4,000	100.0	3,919	100.0
1933	3,410 <u>b/</u>	85.2	3,360	85.7
Old	2,547	63.7	2,510	64.0
New	863	21.5	850	21.7
Decline in old, 1929 to 1933 <u>c/</u>	1,453	36.3	1,409	36.0

Source: Census of American Business, 1933, Wholesale Distribution, New and Old Establishments; basic data from Table 1 and Appendix A. The 1933 data do not include establishments with annual sales of less than \$1,000 or less than \$500 in the case of assemblers and country buyers.

- a/ "Old" establishments refer to those which started operation prior to 1930 and "new" refers to those establishments which started operations subsequent to 1929.
- b/ This total is not consistent with the total of 3,417 establishments elsewhere reported by the Census.
- c/ Obtained by subtracting the figures for "old" establishments, in 1933, from the total in business in 1929.

Principal Competitors

The principal groups whose products compete with the products handled by this Trade are producers of the various materials in their primary state -- such as railroads and other large producers of waste materials -- who sell their waste direct to reclaiming mills and smelters.

Principal Products Used by Other Industries

All of the products handled by this Trade are used by other industries in the preparation, manufacture, production, or marketing of various products.

Principal Customers

Some of the principal users of the products of this Trade are:

Blast furnaces
Metal smelters
Paper mills

Woolen mills
Waste and cotton shoddy mills
Mattress and stuffing manufacturers
Rag rug mills
Rubber mills and reclaimers
Cotton buff manufacturers

Chapter II

LABOR STATISTICS

Total Number of Employees

It is stated in the "Report to the President" on this Code that in 1929 the Trade employed 180,000 workers.

The 1929 Census reported the average number of full and part-time employees in all types of establishments as 22,277 and, in 1933, the figure was 15,501. ^{1/} The Census figure for 1929 is thus much lower than the total as reported to the President. This is due in part, no doubt, to differences in coverage, but also to the fact that the President's report figure is an estimate.

Average Number of Employees by Principal States

In the absence of complete data by states on the total number of employees in the Trade, data are presented in Table VIII, below, for wholesalers proper in the six states having the largest sales. In 1929, these states accounted for about 50 per cent of the total employees reported by wholesalers proper. By 1933 other states appear to have gained relatively since the six leading states accounted for only 46 per cent of the total, but such a statement can not be made definite because the 1933 data do not include part-time employees as do the 1929 data.

TABLE VIII

Average Number of Employees ^{a/} of Wholesalers Proper,
by Six Principal States, 1929 and 1933

State	1929		1933	
	Number	Per Cent of Total	Number	Per Cent of Total
U. S. Total	21,679	100.0	12,683	100.0
California	1,062	4.9	785	6.3
Illinois	1,669	7.7	882	7.0
Massachusetts	1,091	5.0	671	5.4
New York	2,007	9.3	906	7.2
Ohio	2,425	11.2	1,391	11.1
Pennsylvania	2,444	11.3	1,133	9.0
All Others	10,981	50.6	6,759	54.0

Source: Census of Wholesale Distribution, 1929, U. S. Summary and State reports, Table 2; and Census of American Business, 1933, Wholesale Distribution, U. S. Summary and State reports, Table 2B. The 1933 data do not include establishments with annual sales of less than \$1,000.

^{a/} Figures include both full and part-time employees in 1929 and full-time only in 1933.

^{1/} Total of full and part-time obtained by adding figures for these two groups as reported in the preliminary Census release, dated November, 30, 1934, for the Wholesale Trade for 1933.



Average Number of Employees by Chief Divisions of the Wholesale Trade, by Principal States

The different divisions of the Trade are not equally important within these six states. As data for wholesalers proper (Table IX, below) indicate, a given state may account for a large proportion of the total employment in one line but only a small proportion in another. Thus, in 1929, employees of wholesalers proper in Pennsylvania and also in Ohio each constituted more than 15 per cent of total employment in iron and steel scrap, but only about 7 per cent of employment in waste rubber, rags, and paper. In this latter Division, New York and Massachusetts were the leading states, accounting together for nearly 30 per cent of the total reported for this group.

TABLE IX

Average Number of Employees a/ of Wholesalers Proper, by Chief Divisions of the Trade, by Six Principal States, 1929

States	<u>All Divisions</u>		<u>Junk & Scrap</u>		<u>Division</u>		<u>Waste Rubber,</u>	
					<u>Iron & Steel</u>		<u>Scrap</u>	
	Number	Per Cent of Total	Number	Per Cent of Total	Number	Per Cent of Total	Number	Per Cent of Total
U. S. Total	21,679	100.0	11,868	100.0	6,160	100.0	3,651	100.0
California	1,062	4.9	780	6.6	118	1.9	164	4.5
Illinois	1,669	7.7	965	8.1	434	7.1	270	7.4
Massachusetts	1,091	5.0	405	3.4	385	4.6	401	11.0
New York	2,007	9.2	889	7.5	439	7.1	679	18.6
Ohio	2,425	11.2	1,176	9.9	988	16.0	261	7.1
Pennsylvania	2,444	11.3	1,057	8.9	1,108	18.0	279	7.6
All Others	10,981	50.7	6,596	55.6	2,788	45.3	1,597	43.8

Source: Census of Wholesale Distribution, 1929, U. S. Summary and State reports, Table 2.

a/ Figures include both full and part-time employees.

Seasonality of Employment

For full-time employment in all establishments, a seasonal variation of from 82 per cent of average monthly employment in January to 115 per cent in September is indicated for 1933 in Table X. The entire last half of the year showed employment which was above the average for the year for both full and part-time employees.

TABLE X

Seasonality of Employment in All Types of Wholesale Establishments, 1933

Week ending nearest the 15th	Full-time employees		Part-Time employees	
	Number	Per Cent of Average	Number	Per Cent of Average
January	10,450	82	2,371	84
February	10,548	83	2,376	84
March	10,588	84	2,502	89
April	11,121	88	2,577	91
May	12,098	95	2,752	98
June	13,044	103	2,825	100
July	13,819	109	2,998	106
August	14,485	114	3,172	113
September	14,534	115	3,284	117
October	14,247	112	3,016	107
November	13,676	108	3,039	108
December	13,585	107	2,898	103
Average	12,633	100	2,818	100

Source: Census of American Business, 1933, Wholesale Distribution, U. S. Summary, Table 6. The 1933 data do not include establishments with annual sales of less than \$1,000 or less than \$500 in the case of assemblers and country buyers.

Total Annual Payrolls

Total annual payrolls for both full and part-time employees in the Wholesale Trade, as reported by the Census, were \$30,426,000 in 1929 and \$13,131,000 in 1933. This showing of a decline, which amounts to about 57 per cent, is probably somewhat exaggerated due to the fact -- already noted -- that the 1933 Census canvass did not cover the smaller establishments whereas the 1929 canvass did.

Annual Payrolls by Principal States

In the absence of complete breakdowns by states on total payrolls, Table XI, below, has been prepared to present payrolls of wholesalers proper for the six leading states. These states together accounted for about 55 per cent of the total payrolls reported by wholesalers proper in both 1929 and 1933.

TABLE XI

Annual Payrolls ^{a/} of Wholesalers Proper, by Six Principal States, 1929 and 1933

State	1929		1933	
	Amount (000's)	Per Cent of Total	Amount (000's)	Per Cent of Total
U. S. Total	\$28,732	100.0	\$12,825	100.0
California	1,598	5.6	777	6.0
Illinois	2,772	9.6	1,153	9.0
Massachusetts	1,525	5.3	867	6.7
New York	3,186	11.1	1,099	8.6
Ohio	3,474	12.1	1,550	12.1
Pennsylvania	3,481	12.1	1,520	11.9
All Others	12,696	44.2	5,859	45.7

Source: Census of Wholesale Distribution, 1929, U. S. Summary and State reports, Table 2; and Census of American Business, 1933, Wholesale Distribution, U. S. Summary and State reports, Table 2B. The 1933 data do not include establishments with annual sales of less than \$1,000.

^{a/} Figures cover both full and part-time employees in both years.

Annual Payrolls by Chief Divisions of the Wholesale Trade, by Principal States

Table XII, below, gives payroll data comparable with the employment data presented above in Table IX. In general, the states rank about the same as in the case of employment, but the concentration is somewhat more marked, with the result that a somewhat smaller proportion of the total is accounted for by "other states" -- a condition which holds true for each of the chief divisions. This indicates higher wage rates in the principal states and/or a larger proportion of full-time employees.

TABLE XII

Annual Payrolls ^{a/} of Wholesalers Proper, by Chief Divisions of the Trade, by Six Principal States, 1929

States	Division							
	All Divisions		Junk & Scrap		Iron and Steel Scrap		Waste Rubber Rags & Paper	
	Amount (000's)	Per Cent of Total	Amount (000's)	Per Cent of Total	Amount (000's)	Per Cent of Total	Amount (000's)	Per Cent of Total
U. S. Total	\$28,732	100.0	\$14,125	100.0	\$10,067	100.0	\$4,540	100.0
California	1,598	5.6	1,123	7.9	206	2.1	269	5.9
Illinois	2,772	9.6	1,521	10.8	349	3.4	402	8.8
Massachusetts	1,525	5.3	520	3.7	507	5.0	498	11.0
New York	3,186	11.1	1,243	8.8	840	8.3	1,103	24.3
Ohio	3,474	12.1	1,422	10.1	1,772	17.6	280	6.2
Pennsylvania	3,481	12.1	1,218	8.6	1,932	19.2	331	7.3
All Others	12,696	44.2	7,078	50.1	3,961	39.4	1,657	36.5

Source: Census of Wholesale Distribution, 1929, U. S. Summary and State Reports, Table 2.

^{a/} Figures cover both full and part-time employees

Per Cent which Wages are of Net Sales

As reported by the Wholesale Census for 1933, the total wages paid in the Trade were \$13,131,000 and total net sales amounted to \$282,602,000, thus indicating that wages are approximately 5 per cent of total net sales.

Hourly Wage Rates

From about 200 questionnaires received and analyzed in 1933 by the NRA, Research and Planning Division, it was found that on June 15, 1933, 80 per cent of the employees covered by the sample were receiving less than 35 cents per hour, 50 per cent were receiving less than 25 cents per hour, while rates as low as 5 cents per hour were reported. ^{1/}

The Code established minimum rates as follows:

	North	South
Male labor, per hour	\$.32 ¹ / ₂	\$.27 ¹ / ₂
Female labor, per hour	.27 ¹ / ₂	.22 ¹ / ₂

^{1/} For further details see NRA, Research and Planning Report, "Scrap Iron, Nonferrous Scrap Metals and Waste Materials Trade," by F. C. Reich (January 16, 1934), Chapter III.

Weekly Wages

Table XIII below, gives average weekly wages paid by wholesale merchants for the United States and the six leading states in 1933. For the Country as a whole, weekly average wages in all divisions of the Trade was \$17.51 in 1933. It was somewhat higher than this for the six states listed, viz., \$20.37. The average was highest in Massachusetts and lowest in California.

Among the chief divisions of the Trade, the Iron and Steel Scrap Division usually -- but not always -- reported the highest averages. The two exceptions were in Massachusetts and New York, in which states the highest wages were reported in the Waste Paper, Rags, and Rubber Division.

The statement was made by a member of the Trade that, for four or five years preceding 1933 and especially during the depression, employees of retail waste dealers earned an average of \$6 to \$8 for working 60 to 65 hours a week, making 13 cents an hour. ^{1/}

TABLE XIII

Average Weekly Wages Paid by Wholesale Merchants, by
Chief Divisions of the Trade, by Principal States, 1933

State	All Divisions	Division		
		Iron and Steel Scrap	Junk and Scrap	Waste Rubber, Rags, and Paper
U. S. Total	\$17.51	\$19.45	\$16.53	\$17.16
California	18.10	20.98	16.20	20.53
Illinois	22.24	38.19	18.30	16.13
Massachusetts	23.62	17.74	14.49	28.06
New York	21.47	17.20	20.57	23.29
Ohio	19.31	25.82	16.52	14.75
Pennsylvania	18.86	22.41	18.56	14.81
Average, Six States	20.37	24.87	17.73	20.16
Average, All Other States	15.06	15.46	15.59	13.89

Source: Computed from the average number of full-time employees and the annual full-time payrolls, as reported in, or derived from, the Census of American Business, 1933, Wholesale Distribution, U. S. Summary and State reports, Table 2B.

The 1933 data do not include establishments having annual sales of less than \$1,000.

^{1/} Hearing on Scrap Iron, Nonferrous Scrap Metals and Waste Materials Industry, November 22, 1933, p. 254 of transcript.

Average Hours Worked per Week

Table XIV, below, based upon data obtained from answers to questionnaires as received in 1933 by NRA, Research and Planning Division, indicates that average weekly hours in the group covered in June, 1929, were 51.1 for men and 46.5 for women who were classed as warehouse and yard employees. Office employees worked a shorter week, the men here also putting in longer hours than the women. In June, 1933, the average for both sexes in both groups had fallen off slightly and by October of the same year hours had been further reduced under the President's Reemployment Agreement -- particularly for the warehouse and yard group. The averages for this group then stood at 38.5 for men and 37.9 for women.

TABLE XIV

Average Hours Worked per week, by Sex, for Two Groups
of Employees, for Selected Dates, 1929 and 1933 a/

Week Including	Average Hours Worked	
	Warehouse Yard Employees	Office Employees
June 15, 1929		
Male	51.1	42.9
Female	46.5	39.0
June 15, 1933		
Male	49.6	39.8
Female	44.7	38.6
October 15, 1933		
Male	38.5	37.1
Female	37.9	35.0

Source: NRA, Research and Planning Report, "Scrap Iron, Nonferrous Scrap Metals and Waste Materials Trade," by F. C. Reich (January 16, 1934), Chapter II, Table I.

a/ The number of reporting establishments ranged from 129 in June, 1933, to 166 in October, 1933. The average of hours worked was obtained by dividing total man-hours reported by the number of employees.

Table XV, below, classifies the warehouse and yard employees covered by the Research and Planning Division sample by the number of hours worked in the week including June 15, 1933. Persons in the classification having the largest number of workers, or 24 per cent of the total, were reported to be working 45.1 to 50 hours. The data show that nearly half the total workers covered were at this time working more than 50 hours per week, and more than 80 per cent were working more than 40 hours, the maximum prescribed, with exceptions, by the Code.

TABLE XV

Warehouse and Yard Employees Classified According to
the Number of Hours Worked in the Week Including
June 15, 1933 ^{a/}

Hours Worked	Number of Employees	Per Cent of Total	Cumulative Per Cent
20 or under	46	2.9	2.9
20.1 to 25	28	1.8	4.7
25.1 to 30	27	1.7	6.4
30.1 to 35	36	2.3	8.7
35.1 to 40	123	7.8	16.5
40.1 to 45	199	12.6	29.1
45.1 to 50	375	23.7	52.8
50.1 to 55	275	17.4	70.2
55.1 to 60	306	19.3	89.5
Over 60	<u>168</u>	<u>10.6</u>	<u>100.0</u>
Total	1,583	100.0	100.0

Source: NRA, Research and Planning Report, "Scrap Iron, Nonferrous Scrap Metals and Waste Materials Trade," by F. C. Reich (January 16, 1934), Chapter II, Table II.

^{a/} The number of reporting establishments was 160.

Chapter III

MATERIALS: RAW AND SEMI-PROCESSED

Principal Materials Handled by the Trade

The principal materials handled by this Trade are waste metals, textiles, rubber, and paper. In addition, a miscellaneous assortment of waste materials is handled by the Trade.

Areas of Production

Waste materials are produced in every state; as suggested by the statistics on sales for the Trade, production is, however, considerably concentrated in industrial centers because of the waste products of factories and mills.

Imports

Value. - Total imports of waste materials declined from a value of \$41,745,000 in 1929 to \$4,500,000 in 1932, but by 1934 had recovered to \$10,801,000, as shown in Table XVI, below. The extent of the decline and recovery in each of the three chief groups was of roughly similar proportions, except in the case of scrap iron and steel where the changes were sharper.

Volume. - The total volume of imports, as also given in Table XVI, below, for the same years, showed a much more moderate decline and a somewhat less pronounced recovery, with the situation for the various groups similar to that noted just above under value of imports.

Machinery and Equipment

The equipment used in this Trade consists chiefly of trucks, balers, metal cutters and cranes.

TABLE XVI

Volume and Value of Imports, by Principal Groups, 1929-1934
(In thousands)

Item	All Groups	Group		
		Scrap Iron and Steel	Non-Ferrous Scrap Metals	Other Commodities
1929				
Volume (pounds)	983,202	201,600	79,391	702,211
Value	\$41,745	\$1,467	\$12,313	\$27,965
1930				
Volume (pounds)	472,803	60,480	39,562	372,761
Value	\$20,214	\$395	\$5,831	\$13,988
1931				
Volume (pounds)	271,519	35,840	23,347	212,332
Value	\$8,460	\$118	\$2,864	\$5,478
1932				
Volume (pounds)	209,675	22,400	13,139	174,136
Value	\$4,532	\$59	\$1,427	\$3,046
1933				
Volume (pounds)	437,599	127,680	20,548	289,171
Value	\$10,074	\$438	\$3,215	\$6,421
1934				
Volume (pounds)	361,238	98,560	19,105	244,173
Value	\$10,801	\$358	\$3,578	\$6,865

Source: Foreign Commerce and Navigation of the United States, 1929, 1930, 1931; and Monthly Summary of Foreign Commerce in the United States, 1932, 1933, and 1934.

Chapter IV

PRODUCTION AND DISTRIBUTION

Value of Products Sold in Each State

The amount of net sales of wholesalers proper in the six principal states is shown in Table XVII, below, for 1929 and 1933. It is a matter of interest that the proportion of the nation's waste sold in each of the six largest producing states declined materially between 1929 and 1933. The proportion of the national total accounted for by these six states was about 63 per cent in 1929 but only 36.5 per cent in 1933. This indicates that sales of waste fell off more rapidly in the industrial states than in the country as a whole during these years.

TABLE XVII

Net Sales of Wholesalers Proper, by Six Principal States,
1929 and 1933

State	1929		1933	
	Amount (000's)	Per Cent of Total	Amount (000's)	Per Cent of Total
U. S. Total	\$474,453	100.0	\$272,173	100.0
California	19,635	4.1	6,971	2.5
Illinois	44,597	9.4	18,459	6.8
Massachusetts	22,092	4.7	8,860	3.3
New York	62,239	13.1	16,947	6.2
Ohio	80,752	17.0	28,258	10.4
Pennsylvania	70,205	14.8	19,794	7.3
All Others	174,933	36.9	172,384	63.5

Source: Census of Wholesale Distribution, 1929, U. S. Summary and State reports, Table 2; and Census of American Business, 1933, Wholesale Distribution, U. S. Summary and State reports, Table 2B. The 1933 data do not include establishments with annual sales of less than \$1,000.

Net Sales by Chief Divisions of the Wholesale Trade, by Principal States

Net sales of wholesalers proper are given for the chief divisions of the Trade for 1929 in Table XVIII, below. Striking features of this table are found in the facts that one-third of the nation's sales of waste rubber, rags and paper are made in New York State; that Ohio and Pennsylvania together supplied 47.1 per cent of the nation's sales of Iron and Steel Scrap; and that New York, Ohio, and Illinois accounted for nearly 35 per cent of total sales of junk and scrap.

TABLE XVIII

Net Sales of Wholesalers Proper, by Chief Divisions of the Trade,
by Six Principal States, 1929

State	Division							
	All Divisions		Junk & Scrap		Iron & Steel Scrap		Waste Rubber, Rags & Paper	
	Amount (000's)	Per Cent of Total	Amount (000's)	Per Cent of Total	Amount (000's)	Per Cent of Total	Amount (000's)	Per Cent of Total
U.S. Total	\$474,453	100.0	\$213,783	100.0	\$207,759	100.0	\$52,911	100.0
Calif.	19,636	4.1	13,251	6.2	2,695	1.3	3,690	7.0
Ill.	44,597	9.4	23,636	11.0	16,402	7.9	4,559	8.6
Mass.	22,032	4.7	10,834	5.1	7,421	3.6	3,837	7.3
N. Y.	62,239	13.1	25,340	11.9	19,573	9.3	17,526	33.1
Ohio	30,752	17.0	24,901	11.6	52,343	25.3	3,308	6.3
Penna.	70,205	14.8	30,493	9.6	45,265	21.8	4,447	8.4
All Others	174,952	36.9	95,328	44.6	64,060	30.8	15,544	29.3

Source: Census of Wholesale Distribution, 1929, U. S. Summary and State reports, Table 2.

Consumption of Waste

Non-Ferrous Scrap. - The consumption of nonferrous metals occurs in about the proportion of 3 to 1 as to primary and secondary 1/ metals. Table XIX, below, shows that consumption of secondary metals rose from 31.5 per cent of the total to 37.3 per cent during the period 1931-1933.

1/ It is not known what percentage of this secondary metal actually was handled by waste material dealers.

TABLE XIX

The Proportion of Secondary Non-Ferrous Scrap, by
Principal Kinds, Consumed or Available for
Consumption, 1931-1933
(In per cent)

Kind	1931	1932	1933
Total	31.5	36.4	37.3
Copper <u>a/</u>	56.7	41.1	45.4
Lead <u>b/</u>	41.3	49.6	51.1
Zinc (slab) <u>b/</u>	10.0	8.6	13.0
Aluminum <u>c/</u>	24.3	30.5	41.3
Tin <u>d/</u>	21.9	27.1	24.8

Source: Bureau of Mines, Minerals Yearbook 1933-34.

- a/ Available for domestic consumption.
- b/ Domestic consumption.
- c/ Production plus imports, less exports. Stocks not available for calculation of actual consumption.
- d/ Apparent consumption. Stocks not available for calculation of actual consumption.

Reclaimed Rubber. - The data given in Table XX, below, on consumption of new and reclaimed 1/ rubber over a series of years indicate that, in general, the relative proportion of reclaimed rubber consumed rises as the price of crude rubber rises, and vice versa. The relative proportion of reclaimed rubber declined 45 per cent from 1929 to 1933, while the price of crude rubber declined about 70 per cent. With the increase in crude rubber price the consumption of reclaimed rubber has been stimulated.

1/ The proportion of this rubber actually handled by waste material dealers is not known.

TABLE XX

Consumption of Total Rubber and of Reclaimed Rubber, and
Wholesale Price Index of Crude Rubber, 1926-1934

Year	Rubber Consumption			Wholesale Price Index of Crude Rubber (1926 = 100)
	Total (Long tons)	Reclaimed Amount (Long tons)	Per Cent of Total	
1926	530,500	164,500	31.0	100.0
1927	562,500	183,500	33.7	77.9
1928	660,000	223,000	33.8	46.4
1929	634,400	217,000	31.7	42.3
1930	529,500	153,500	29.0	24.5
1931	473,000	123,000	26.0	12.8
1932	409,500	77,500	18.9	7.3
1933	486,000 <u>a/</u>	85,000 <u>a/</u>	17.5 <u>a/</u>	12.2
1934	554,078 <u>a/</u>	100,855 <u>a/</u>	18.2 <u>a/</u>	26.5

Source: Rubber consumption data, 1926-1932, from Bureau of Foreign and Domestic Commerce, Rubber Division, Special Circular, No. 3420, p.1; price data as published in Bureau of Labor Statistics, Wholesale Prices bulletins.

a/ Estimated.

Iron and Steel Scrap - The National Association of Waste Material Dealers has contributed the following statement and data:

"According to the 1929 Census of Manufactures, the total scrap iron and scrap steel consumed in the United States in 1929 (exclusive of that used by the manufacturers of motor vehicles and railroad repair shops) totaled 39,127,848 gross tons valued at \$540,662,524. Of this amount 13,988,399 gross tons were produced and reworked in the same steel and rolling mills; 953,170 gross tons were produced and transferred to other steel and rolling mills under the same ownership; 1,871,891 gross tons were transferred to steel and rolling mills of different ownership; and it was estimated at a conference with the Census Bureau that an additional 5,673,176 gross tons of the total consumption by other industries did not pass through the hands of scrap iron and steel dealers. This leaves a total of 16,636,212 gross tons of scrap iron and steel which passed through the hands of waste material dealers.

"The average price of scrap iron and steel for 1929, as reported in the Survey of Current Business (published by the Department of Commerce) was \$14.79 per gross ton. At this price the total volume of scrap iron and steel handled by the waste material dealers in 1929 was valued at \$246,049,575.

"Assuming that the amount of scrap iron and steel consumed in the steel industry (in the absence of actual figures such as are available for 1929) followed the same trend as the production of iron and steel as reported

in the Federal Reserve Bulletin, and using the average price per gross ton as reported in the Survey of Current Business, the following table shows the value of the scrap iron and steel consumed which passed through the hands of waste material dealers from 1929 through 1932.

	<u>1929</u>	<u>1930</u>	<u>1931</u>	<u>1932</u>
Computed value of scrap iron and steel passing through hands of waste material dealers (dollars)	246,049,575	145,072,888	67,121,998	24,794,356"

Distribution

General.-- The small junk dealer is the first stopping place for the peddler or collector. It is here that the peddler unloads all the merchandise that he has accumulated during the day. From the peddler's wagon, the merchandise is placed in boxes, weighed, and taken to bins where some grading and sorting is done. It is then baled and is ready for delivery to the wholesaler who, in turn, sells it to the mill. These processes cost the junk dealer from \$3.50 to \$4.00 per ton for fairly clean waste paper. Costs for sorting other materials are not known.

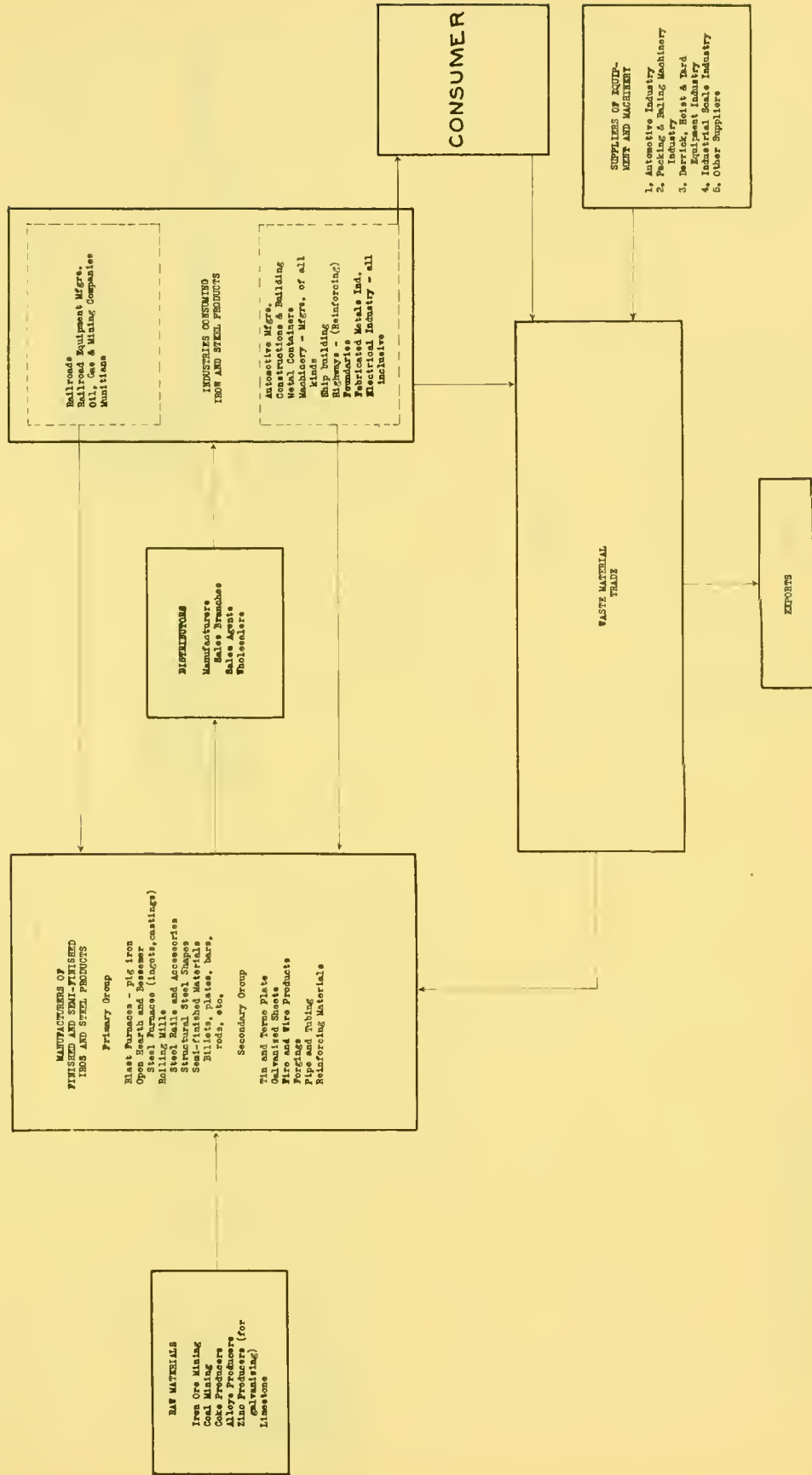
The following flow charts (Charts I - 1, 2, 3, 4, and 5) show graphically the steps in the production and distribution of waste materials for each of five chief divisions of the Trade.

Recent Development of Direct Dealing. - A type of "direct dealing" competition which has increased since and during the course of the depression, and which serves to reduce the volume passing through the hands of established dealers, is that offered by the one-man trucking operator. This individual picks up waste material from the producers or the small "mixed" dealer, and trucks it to the yards of the industrial consumer, where it is disposed of, in many cases, for little more than cost. This type of operator has served to make the problem of control over prices, wages, or hours an almost impossible one in the Trade.

Another direct result of the depression has been the increase of salvaging operations by large producers and consumers of waste material. For example, in an attempt to reduce costs, railroads have established salvage departments which collect for re-use such waste as wiping cloths and the rags used as journal box packing with a consequent increase in the amount of re-used material. This has naturally resulted in a decrease in their purchases of this type of material from established dealers. Another instance of a slightly different sort is the case of textile mills which sort and grade their own waste and sell it direct to manufacturers of re-work products such as rag-rug concerns and mattress manufacturers.

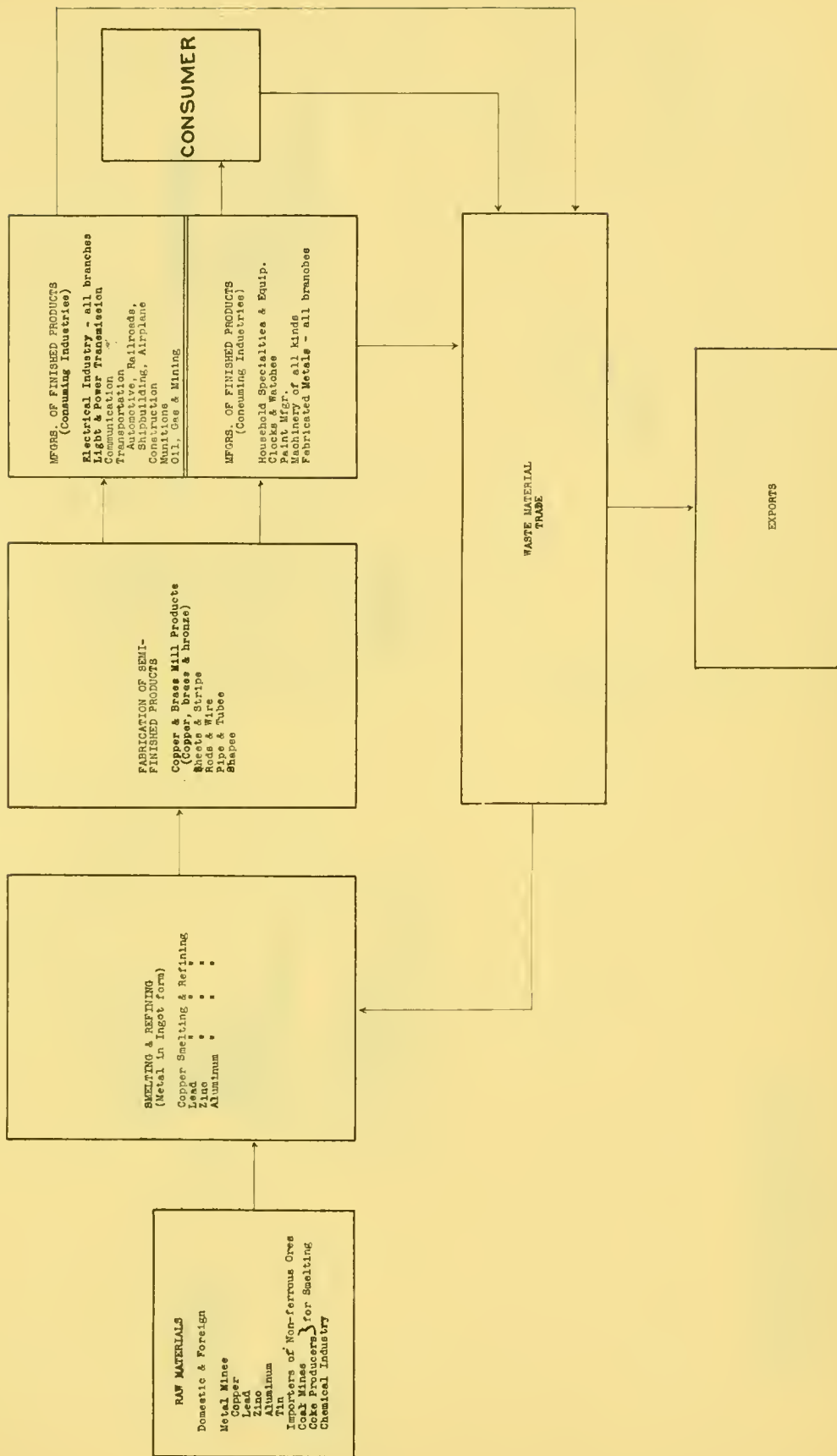
"Direct dealing" appears in another form in the Waste Paper Trade -- namely, that of the mill-owned or controlled waste paper dealer.

WASTE MATERIAL TRADE I SCRAP IRON AND STEEL DIVISION



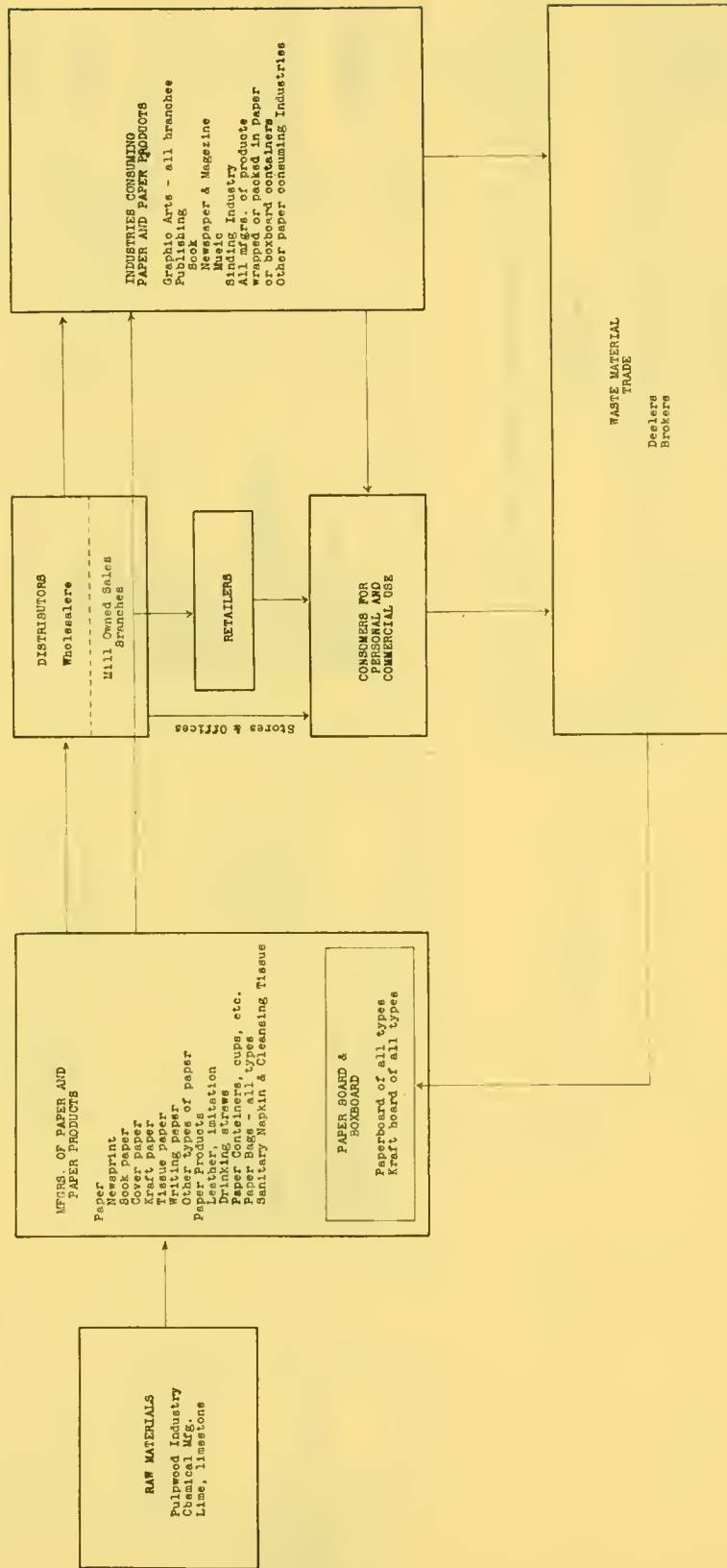
WASTE MATERIAL TRADE

II NON-FERROUS SCRAP METALS DIVISION



WASTE MATERIAL TRADE

III WASTE PAPER DIVISION

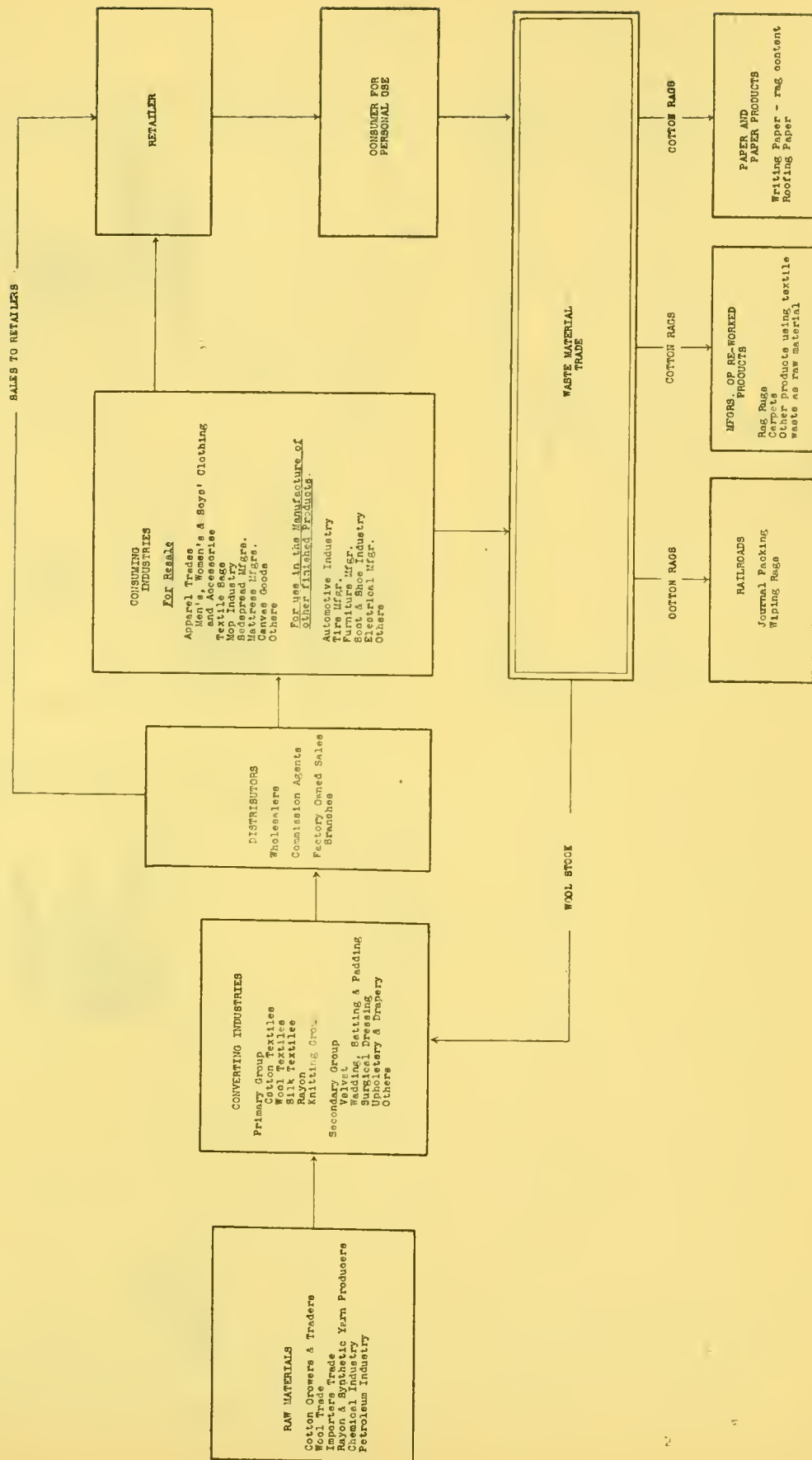


Note: The chief raw material for the production of paper board and boxboard is waste paper and practically all sales of waste paper by waste material dealers are to paper board manufacturers.

WASTE MATERIAL TRADE

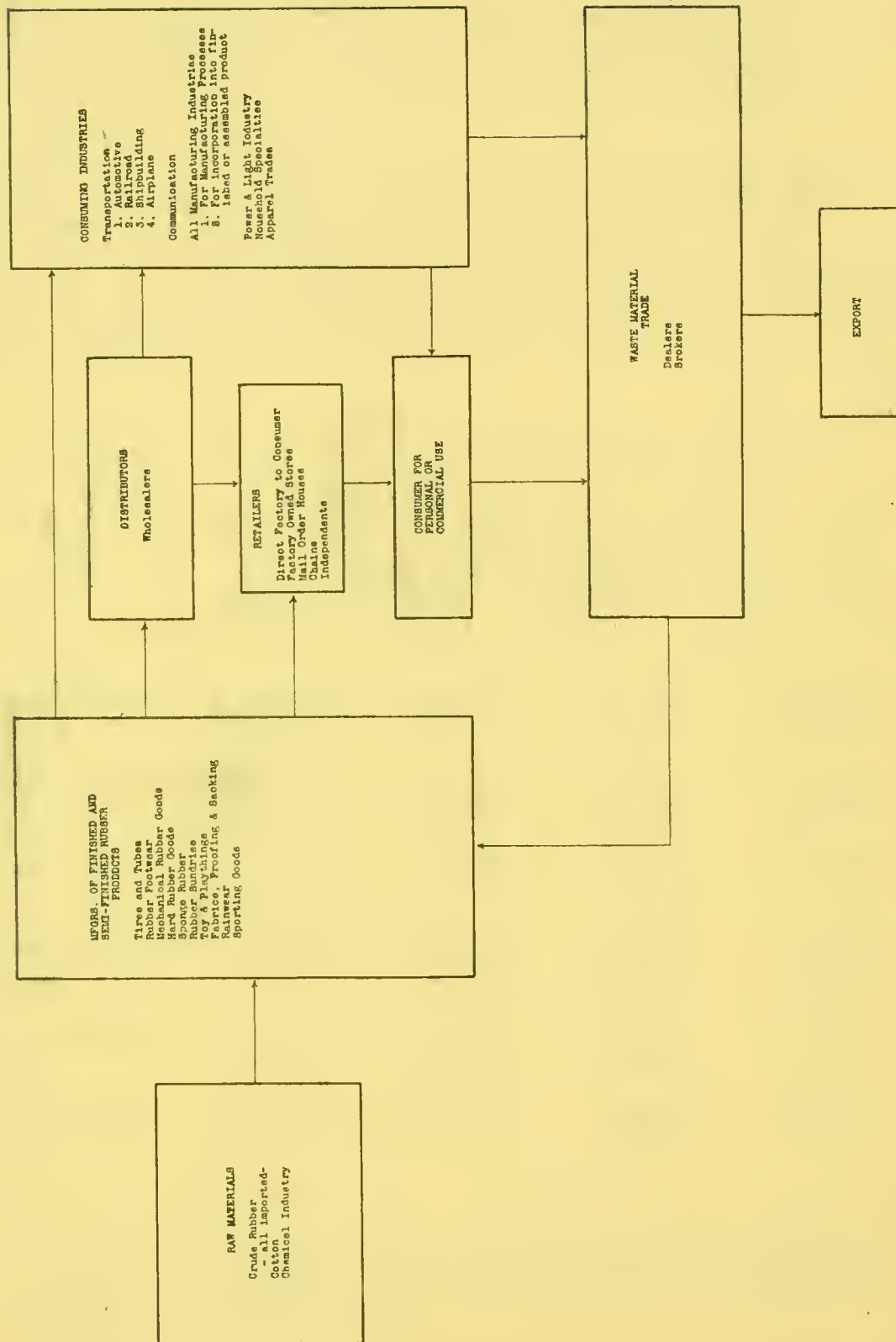
4 TEXTILE WASTE DIVISION (COTTON RAG)

(WOOL STOCK)



WASTE MATERIAL TRADE

V SCRAP RUBBER DIVISION



Exports

Value. -- As shown in Table XXI, below, the total value of export shipments of waste materials, from 1929 to 1932, declined over 70 per cent. However, in 1934 approximately the same value was received from waste materials exported as was received in 1929. Most of this recovery was accounted for by the enormous increase in the volume of scrap iron and steel exported from 1932 to 1934.

Volume. -- The total volume of exports declined about 50 per cent from 1929 to 1932, but the 1934 total almost tripled the 1929 figures. The extent of the decline and recovery varied considerably from one group to another as indicated in the following table. For example, the volume of exports in the scrap iron and steel group declined more than 50 per cent and then came back to a point more than three times its 1929 total, while non-ferrous scrap metals declined only about 25 per cent and then rose to a point just above the 1929 level.

TABLE XXI
Volume and Value of Exports, by Principal Groups, 1929-1934
(In thousands)

Item	All Groups	Group		
		Scrap Iron & Steel	Non-Ferrous Scrap Metals	Other Commodities
1929				
Volume (pounds)	1,595,408	1,247,680	91,982	255,746
Value	\$32,987	\$7,748	\$11,692	\$13,547
1930				
Volume (pounds)	1,067,801	804,160	79,720	183,921
Value	\$21,976	\$5,562	\$7,985	\$8,429
1931				
Volume (pounds)	575,715	304,640	91,872	179,203
Value	\$14,887	\$1,957	\$7,149	\$5,781
1932				
Volume (pounds)	763,127	508,480	68,640	186,007
Value	\$9,657	\$1,859	\$3,589	\$4,209
1933				
Volume (pounds)	1,999,772	1,749,440	64,647	185,685
Value	\$14,896	\$6,365	\$3,554	\$4,477
1934				
Volume (pounds)	4,443,607	4,110,400	93,636	239,571
Value	\$32,465	\$19,214	\$6,256	\$6,995

Source: Foreign Commerce and Navigation of the United States, 1929, 1930, and 1931; and Monthly Summary of Foreign Commerce of the United States, 1932, 1933, and 1934.

General. - The following excerpts were taken from an Article by R. L. Harding, Chief of the Iron and Steel Division of the Department of Commerce, in the Waste Trade Journal, March 30, 1935.

"Exports of scrap iron and steel increased rapidly in 1933. From 1915 to 1927 exports amounted to one and one-third million tons. For the seven years since 1927 exports amounted to 4,400,000 tons and for the year 1934 exports amounted to 1,835,000 tons.

"In relation to our total production of scrap, all except recent export totals seem surprisingly small. If scrap which the steel mills create and use themselves is included, our total exports since 1914 are probably less than 1.7 per cent of all production. From 1928 to 1934 the amount leaving the country was about 3.2 per cent of the total produced, and in 1934 it was 12.3 of that year's production. The exports for 1934 represent about 18 per cent of total scrap iron and steel collected and sold by the scrap dealers of the country.

"In 1934 shipments to Japan constituted 64 per cent of total exports. Italy, Great Britain and Poland took the bulk of the remainder. It has been notable that through the years the large increases in scrap exports have coincided with periods of low domestic prices.

"As a rule scrap does not move far by rail; freight charges limit the distances over which it can be economically exported in competition with other sources of supply. The chief sources of supply, of course, are the large industrial and manufacturing centers of the country. The principal points of shipment, therefore, for our exports of scrap are those parts which are adjacent to large industrial and manufacturing areas and at the same time reasonably remote from the principal centers of domestic consumption, the steel plants in the interior of our country. The Atlantic and Gulf Coast customs districts took care of about 84 per cent of the entire exports. 27 per cent of the total exports were made from New York."

Advertising

Advertising in this Trade is largely confined to trade journals.

Chapter V

TRADE PRACTICES

Unfair Trade Practices

Various unfair trade practices were complained of by the members of this Trade both before the adoption of the Code and during its operation. The most important of these are: (1) the control of prices by buyers; (2) misrepresentation of products by some members of the Trade; and (3) unjust claims and deductions made by some purchasers.

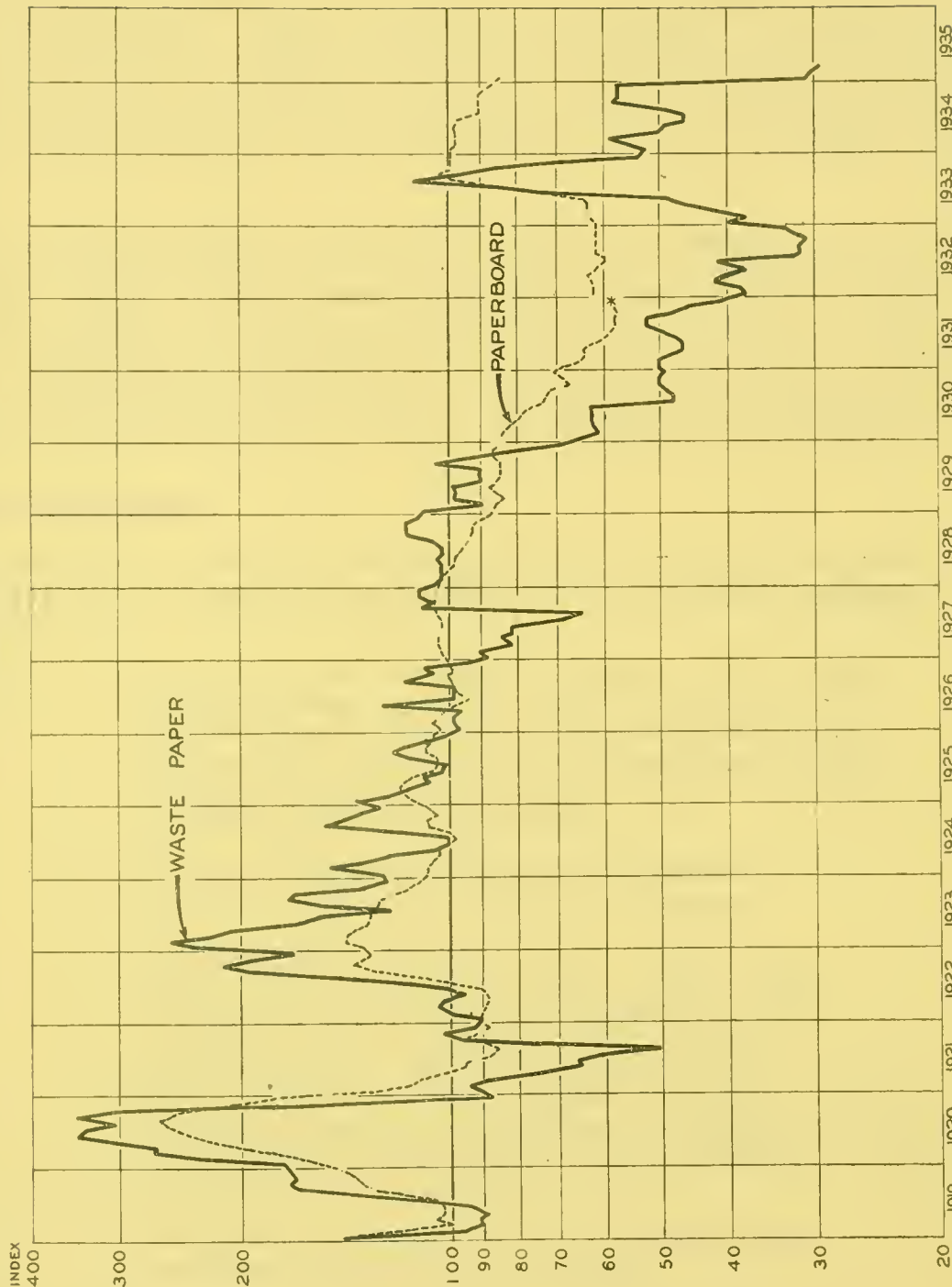
It is alleged that the paper board mills establish the prices for their product by agreement between themselves. The widening margin between prices for paper board and for waste paper is cited in support of this contention. Chart II gives the trend of prices for these two commodities over a number of years.

The same charge is made against the consumers of scrap iron and steel and of non-ferrous scrap metals.

Another unfair practice is said to be the inclusion in the bale of foreign matter to add weight. The charge is also made that bribery and corruption are used by some dealers.

It is charged that some buyers take advantage of the Trade by making unreasonable demands for deductions with the threat of making no more purchases unless their demands are accepted.

CHART XI
 PAPERBOARD AND WASTE PAPER PRICE INDEXES. 1919-1935
 1926=100



*NEW SERIES
 SOURCE:— PAPERBOARD, 1919-1931, HARVARD ECONOMIC SOCIETY;
 1932-1935 COMPUTED FROM BUREAU OF LABOR STATISTICS PRICES.
 WASTE PAPER: PAPER TRADE JOURNAL.

Chapter VI

THE INDUSTRY - GENERAL INFORMATION

General Characteristics

Free and unrestricted competition has for years characterized the Waste Material Trade. Numerous factors have contributed to this situation, chief of which is the widely scattered nature of the Trade, and its failure until recent years to recognize itself as an integrated Trade with common problems, the solution of which were possible only through cooperative action within and between the various divisions of which the Trade is composed.

This is exemplified by the fact that, with the exception of the last decade, the various groups operated independently of each other and without particular regard to their common problems; and even the larger concerns have been unwilling to provide a basis for effective cooperation within the Trade by supplying their Association with pertinent trade data. A picture of the Trade therefore depends on the meagre information gathered by such agencies as the Department of Commerce, the Bureau of Labor Statistics, and the several trade publications dealing with the waste material business.

Outstanding Problems

The history of the Waste Materials Trade is that of a Trade with a multiplicity of problems, the most difficult of which may be summarized as follows:

1. Perhaps the most outstanding problem of the Trade in recent years is the fact that it operates in a buyers' market. Waste materials exist in abundance. However, these materials have no value until they are gathered, sorted, bundled, treated, or otherwise made ready for the market.
2. The impossibility of obtaining cooperative or concerted action by the Trade as a whole.
3. The increase in "direct dealing" within the Trade, which is of two different kinds: first, the one-man trucker who works unlimited hours and pays little or no wages and who picks up material from the smaller dealer and lays it down at the door of the consumer for what it will bring; second, the new type commission merchant who arranges sales by large producers of scrap direct to consumers.
4. The alleged fixing of prices for scrap by the consuming industries at low levels.

Favorable Developments

A favorable development of the last few years is the large increase in the export of scrap iron and steel. In 1934, a total of 4,110,000,000 pounds of scrap iron and steel were exported, which is eight times the

amount exported in 1932, and twenty times the amount exported in 1931. Dealers in the interior have failed to profit from foreign sales, however, as freight rates prevented them from getting reasonable prices at ports. (See Table XXI above.)

Effect of the Code on the Trade

Data on the effect of the Code on this Trade are not available. However, the following describes to some extent its effect on the Waste Paper Division of the Trade:

Eastern prices of the principal product, No. 1 mixed waste paper, were \$10.00 a ton in 1929; \$4.00 a ton in May, 1933, increasing to \$15.00 per ton on June 15; finally reaching \$16.00 per ton in July; and by December, 1933, falling to \$5.00 per ton. After further ups and downs in 1934, prices fell in 1935 to record lows -- even to \$1.00 per ton. An index of waste paper prices in New York and Chicago combined is presented above in Chart II, from which it may be seen that considerable improvement has occurred in recent months.

An emergency in the Waste Paper Trade was declared by NRA and prices were fixed August 21, 1934 to be effective for ninety (90) days. The emergency period was indefinitely extended by an Order issued on November 19, 1934. The emergency was declared terminated December 28, 1934.

In the opinion of the NRA Economic Adviser for this Code, it was evident, that: (1) price fixing had afforded no relief to the Trade; (2) it had induced the collection of stocks of paper beyond the consumption capacity of the consuming mills; (3) the provisions of the price-fixing order were consistently violated by the Trade.

Prices fixed in the original Order were \$6.50 a ton for No. 1 mixed paper, F.O.B., plant, and \$8.50 a ton for folded newspapers, F.O.B., plant. On Page 9, the Order was modified to make the price F.O.B., packer's plant, and for sales of dealers to dealers, the prices were fixed at \$6.00 and \$7.50 a ton, respectively.

Trade Associations

The National Association of Waste Material Dealers, Inc., is the one association representative of the entire Trade, though there are a number of smaller associations representing various branches of the Trade. It is national in scope, and is estimated that its members are responsible for 75 per cent by value of waste materials handled by the Trade. This Association, organized in 1913, was for many years the only national organization of the Trade. As of August 1, 1933, it had 400 members. It is organized with the following divisions: 1/

1/ Special report on Representation of National Association of Waste Material Dealers, Incorporated, prepared by NRA, Research and Planning Division, November 21, 1933.

Scrap Rubber Division
Cotton Waste Division
Scrap Iron Division
Woolen Rag Division
Waste Paper Institute
Association Rag Industries
Secondary Metal Institute
National Wiping Cloth Standardization Association

Other organizations serving various divisions of the Trade are:

Institute of Scrap Iron and Steel, New York City
Aluminum Research Association, Chicago
Non-Ferrous Ingot Metals Institute, Chicago
National Scrap Metal Dealers Association, New York City
Sanitary Institute, Chicago
National Association of Waste Material Producers, New York City
Wool Stock Council, New York City
American Paper Mill Suppliers Institute, New York

